

# **ROUTE 460** **LOCATION STUDY**

VDOT PROJECT NUMBER 0460-969-101,P101

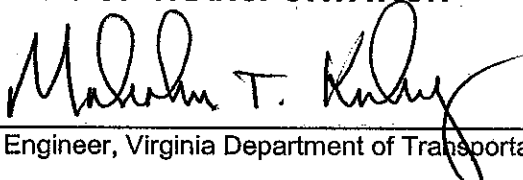
FEDERAL PROJECT NUMBER AC-STP-000S (166)

## **DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Submitted Pursuant to:  
42 U.S.C. 4332(2)(c) and 49 U.S.C. 303

Submitted by:  
**U.S. DEPARTMENT OF TRANSPORTATION**  
**FEDERAL HIGHWAY ADMINISTRATION**  
and  
**VIRGINIA DEPARTMENT OF TRANSPORTATION**

05/25/05  
Date of Approval

  
Chief Engineer, Virginia Department of Transportation

05/26/05  
Date of Approval

  
Planning and Environmental Program Manager,  
Federal Highway Administration

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The proposed action involves transportation improvements to the Route 460 corridor from the intersection of Routes 460 and I-295 in Prince George County to the interchange of Routes 460 and 58 along the Suffolk Bypass.

Comments on this draft EIS are due by July 25, 2005 and should be sent to VDOT to the attention of Mr. Earl T. Robb at the aforementioned address.

### Cooperating Agencies:

Environmental Protection Agency  
U.S. Army Corps of Engineers  
U. S. Fish and Wildlife Service

## **EXECUTIVE SUMMARY**

### **S.1 PROJECT DESCRIPTION**

The proposed action involves the construction of an enhanced or new east-west transportation link between Route 58 in the City of Suffolk and I-295 in Prince George County, Virginia. The study area extends approximately 55 miles and includes the counties of Prince George, Sussex, Surry, Southampton, Isle of Wight and the City of Suffolk.

The study area is bordered by Route 10 to the north, the City of Hopewell and I-295 to the west, and Route 58 to the east. The southern boundary runs parallel and three miles south of the Norfolk Southern rail line. Figure S-1 depicts the location of the study area.

### **S.2 PURPOSE AND NEED FOR THE PROJECT**

The purpose of the project involves the following eight key elements:

1. Address roadway deficiencies: Route 460 has design and operational deficiencies that cause safety and mobility problems.
2. Improve safety: Crash rates for Route 460 are higher than other rural principal arterial roadways in Virginia.
3. Accommodate increasing freight shipments: Truck percentages for Route 460 are significantly higher than national averages for rural roads with similar functional classification, and are forecasted to grow due to expansions at the Port of Virginia.
4. Reduce Travel Delay: Future traffic volumes will result in increased travel delays on Route 460 due to capacity limitations at traffic signals and the lack of access control.
5. Provide adequate hurricane evacuation capability: Route 460 is a designated hurricane evacuation route for Southside Hampton Roads communities, yet during two recent hurricanes, the road was closed due to effects caused by these storms.
6. Improve strategic military connectivity: Route 460 is a designated part of the Strategic Highway Network (STRAHNET) by the Department of Defense and FHWA.
7. Meet legislative mandate: Federal legislation as well as the Virginia Transportation Act of 2000 identified the roadway as a high priority corridor for improvement. Improvements to Route 460 are necessary to meet the intent of these acts.
8. Meet local economic development plans: Jurisdictions along the Route 460 study area have identified economic development priorities related to transportation improvements.

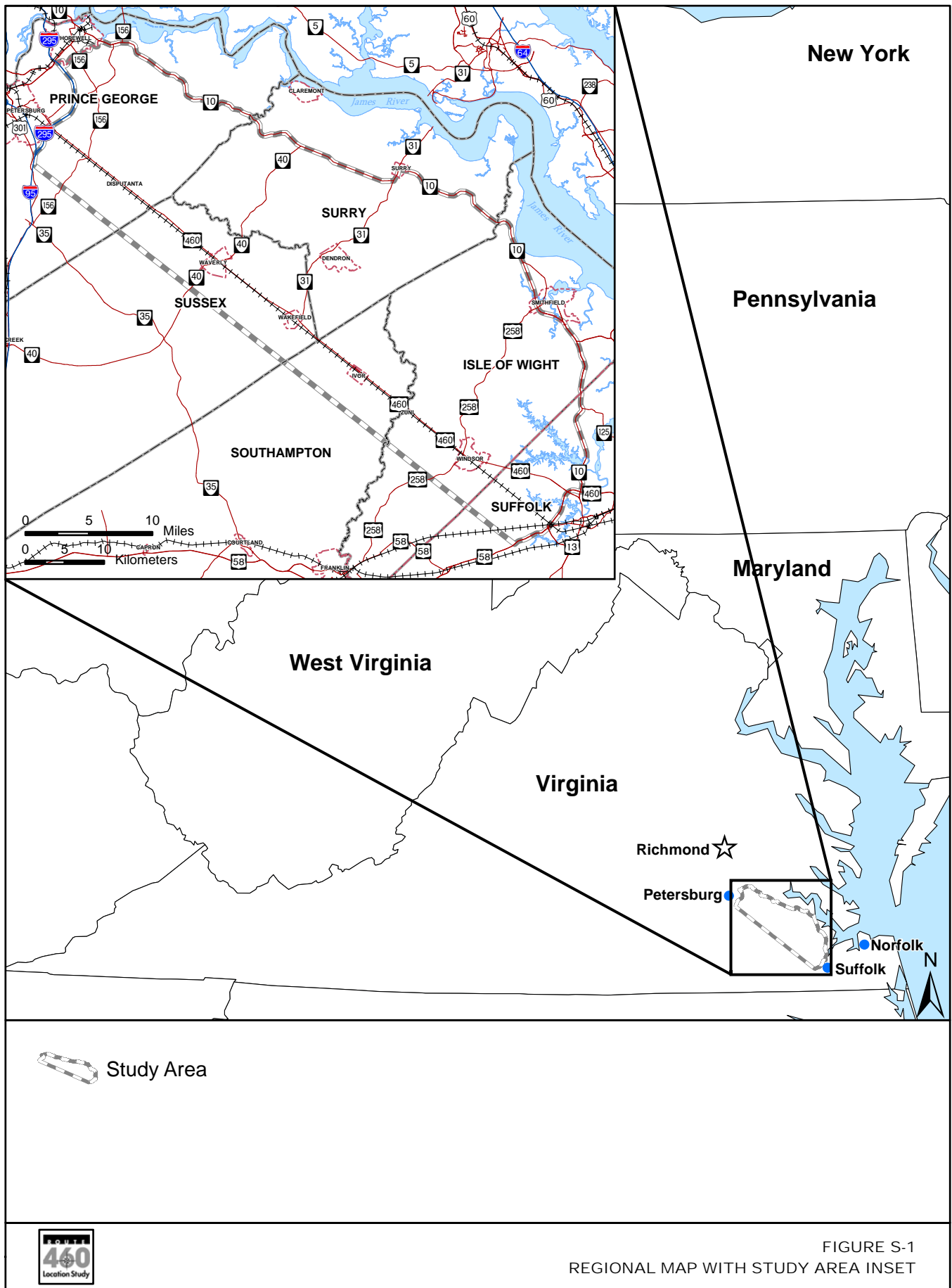


FIGURE S-1  
REGIONAL MAP WITH STUDY AREA INSET

### **S.3 ALTERNATIVES CONSIDERED**

In accordance with accepted NEPA practice and with 23 CFR 771.123 and FHWA Technical Advisory T 6640.8A, a broad range of preliminary alternatives was identified for consideration and development in the Route 460 Location Study.

#### **S.3.1 Alternative Eliminated From Detailed Study**

*Mass Transit Alternative:* Similar to many rural and exurban areas, the study area currently does not have mass transit service. Therefore, this alternative would involve introducing one or a combination of mass transit modes to meet the Purpose and Need.

The area's relatively low, widely-dispersed population precludes consideration of mass transit as a cost-effective solution. In 1993, the Federal Transit Administration published studies that concluded that public mass transit systems are only economically viable in areas with sufficient population densities and employment rates. The studies established standards-based criteria to evaluate an area's potential for mass transit. One standard is to have at least 7 dwelling units per acre linked to a Central Business District (CBD) with an employment base of at least 10,000 and a density of 20 employees per acre. The study area does not contain any CBDs that approach the 10,000 employee standard.

This alternative would not address roadway deficiencies, projected increases in freight traffic, legislative mandates or local economic development goals. Furthermore, the mass transit alternative would not improve hurricane evacuation capability. Since the alternative does not meet the Purpose and Need, and it was removed from further consideration.

#### **S-3-2 Alternatives Retained**

##### **No-Build Alternative**

The No-Build Alternative assumes that currently programmed committed and funded roadway projects in the VDOT Six Year Plan and the Constrained Long Range Plans (CLRPs) developed by the Metropolitan Planning Organizations (MPOs) will be implemented. The No-Build alternative does not address project needs such as improvements to roadway deficiencies, travel delay, hurricane evacuation, safety, and roadway infrastructure improvements. However, it has been retained to serve as a baseline for comparison with the build alternatives. The following is a list of currently committed projects to improve existing Route 460:

- City of Suffolk - arterial signal system - Kings Fork Road to west corporate limits;
- Sussex County - dual left turn lanes on VA 604;
- Prince George County - left turn lane signal modification on VA 156;
- Prince George County - left turn lane signal modification on VA 629/Quaker Road.

##### **Transportation Systems Management Alternative**

Transportation System Management (TSM) improvements are low cost system enhancements that improve the efficiency of the existing transportation system. A TSM alternative could include improvements such as high-occupancy vehicle lanes, ridesharing, signal synchronization, and other actions. TSM could also include strategies to add capacity and improve operational deficiencies of the existing transportation system, including: (1) intelligent transportation systems, (2) travel demand management, (3) access management, and (4) minor geometric improvements.

TSM enhancements identified for this project include the following:

- Add turning lanes at the intersection of Rt. 625.

- Add turning lanes at the intersection of Rt. 601 to the north and Rt. 624 to the south.
- Add right and left turn lanes to the intersection of Route 460 and Route 635.
- Add advance warning lights and/or rumble strips for stop light at the intersection of Route 460 and Route 616.
- Realign Route 460 and Route 618 intersection, with new right- and left-turn lanes.
- Install rumble strips along the existing Rt. 460 centerline.

These collective improvements provide only modest improvements to safety and roadway deficiencies and do not fully meet the Purpose and Need. However, the TSM Alternative has been retained for detailed study since it offers a low-cost option to improve transportation conditions in the study area.

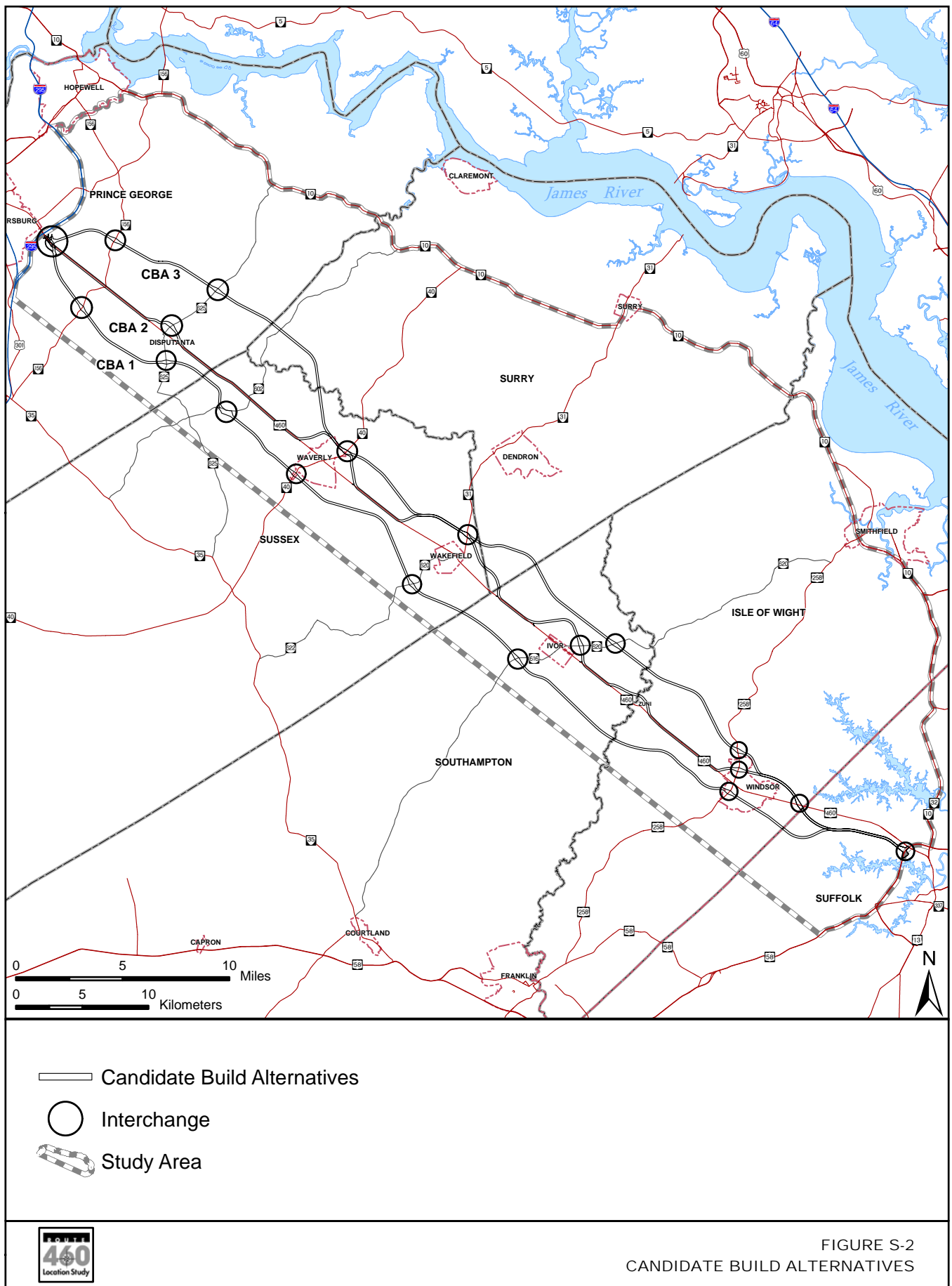
### **Build Alternatives**

Five conceptual alternatives (A through E) were developed to meet the project Purpose and Need. Alternative E and portions of Alternative D were eliminated from further study during an alternative screening process. Three Candidate Build Alternatives (CBAs) were carried forward for detailed study in the EIS (CBA 1, CBA 2, and CBA 3). The travel demand model analysis indicates that each of the CBAs result in travel time savings, reductions in delay, and capacity improvement. The CBAs are described below, and depicted in Figure S-2.

CBA 1 is a new alignment south of existing Route 460. The alternative starts along Route 460 in the Kings Fork area of the City of Suffolk. Nine interchanges would provide access to the new limited access roadway. The interchanges would be located at Route 58 Bypass in Suffolk, Route 258 in Windsor, Route 616 south of Ivor, Route 620 south of Wakefield, Route 40 south of Waverly, Route 602 in Sussex County, Route 625 south of Disputanta Route 156 in Prince George County, and Interstate 295.

CBA 2 follows the alignment of existing Route 460, but includes northern bypasses around Windsor, Zuni, Ivor, Wakefield, Waverly and Disputanta. East of Windsor and throughout the City of Suffolk CBA 2 is located on a new alignment (the same new alignment as CBA 1 & 3). Along each bypass there are access points to existing Route 460 and the secondary roads that lead to the towns: Route 258 in Windsor, Route 620 north of Ivor, Route 31 north of Wakefield, Route 40 north of Waverly, and Route 625 north of Disputanta Route 156 in Prince George County, and Interstate 295.

CBA 3 is a new alignment generally north of existing Route 460. The CBA 3 alignment is the same as CBA 2 from Suffolk to Windsor, where it continues north of existing Route 460. At Wakefield and Waverly the alignment joins the alignment of the bypasses for CBA 2. West of Waverly, the alignment continues north toward the center of the study area north of the Blackwater River. Nine interchanges would provide access to the limited access facility. The interchanges would be located at Route 58 Bypass in Suffolk, existing Route 460 near the Suffolk / Isle of Wight County border, Route 258 in Windsor, Route 616 north of Ivor, Route 31 north of Wakefield, Route 40 north of Waverly, and Route 625 north of Disputanta.



## S.4 SUMMARY OF IMPACTS

Construction of any of the CBAs would satisfy the purpose & need elements identified in section S.2. Selection of a CBA would also provide benefits within the study area such as: improved mobility, enhanced access on existing Route 460 for local traffic, and reduced emergency service response times.

Potential impacts are described in the EIS using a 500-foot-wide Planning Corridor (PC); as well as a narrower Design Corridor (DC). The Design Corridor is 230 feet wide for CBAs 1, 3, and the sections of CBA 2 on new location, and 140 feet wide where CBA 2 follows the existing Route 460 alignment.

The greater width of the PC provides flexibility to further reduce or avoid impacts during final design as study information is collected for a wider area than needed for the actual footprint of the roadway. The impacts identified for the Design Corridor provide the best available estimate of what project impacts for each CBA may be at the current stage of project development. Table S-1 presents the primary consequences associated with the various alternatives within the study area.

**TABLE S-1**  
**ENVIRONMENTAL IMPACT ASSESSMENT MATRIX**

Assessment Factor	Issue /Resource	No-Build	TSM	CBA 1	CBA 2	CBA 3
Land Use Impacts	Agriculturally Zoned (acres Planning Corridor/ acres Design Corridor)	0	0	965/ 517	1,237/ 557	1,229/ 707
	Residentially Zoned (acres PC/ DC)	0	0	195/ 113	340/ 129	155/ 74
	Commercially / Industrially Zoned (acres PC/ DC)	0	0	20/ 7	156/ 41	3/ 0
	Forest and Wetland (acres PC/ DC)	0	0	2,215/ 1,153	1,420/ 617	1,987/ 1,023
Farmlands	Prime Farmlands (acres PC/ DC)	0	0	2,108/ 1,146	1,779/ 833	1,762/ 978
	Agricultural and Forestal Districts (acres PC/ DC)	0	0	23/ 10	0	5/ 3
Public Parklands	Section 4(f) Parkland (acres)	0	0	0	0	0
Visual Impacts	Number of Adversely Affected Visually Sensitive Areas	0	0	4	3	3
Socioeconomics / Relocations	Capital Costs (2005 \$million)	0	3	522	665	550
	Number of Residential Displacements	0	0	99/ 66	187/ 58	51/ 32
	Number Non-Profit/Community Facilities Relocated	0	0	2/ 2	9/ 5	1/ 1
	Number of Commercial Businesses Relocated	0	0	5/ 3	36/ 18	5/ 0
	Lost Tax Revenue (dollars PC/ DC)	0	0	150, 441/ 93,375	241,761/ 92,414	99,601/ 57,430
Environmental Justice	Number of Communities and Neighborhoods Affected	0	0	8	7	5
	Disproportionately High and Adverse Effects to Minority Populations	0	0	0	0	0
Hazardous Materials	Disproportionately High and Adverse Effects to Low-Income Populations	0	0	0	0	0
	Number of Occurrences	0	0	34	104	29
	Number of Sites Identified for Further Evaluation	0	0	1	14	0
Cultural Resources <sup>1</sup>	Number of Fatal Flaw Sites	0	0	0	0	0
	Number of Prehistoric and Historic Archaeological Resources Affected <sup>2</sup>	0	0	TBD	TBD	TBD
	Number of Historic Architectural Resources Adversely Affected	0	0	0	0	0
Noise	Number of Residences Affected	N/A	N/A	156	91	182
	Number of Schools / Churches Affected	N/A	N/A	1/1	1/1	0/2

Assessment Factor	Issue /Resource	No-Build	TSM	CBA 1	CBA 2	CBA 3
Noise	Number of Feasible Noise Barriers	N/A	N/A	51	40	63
	Number of Cost Effective Noise Barriers	N/A	N/A	0	0	0
Streams	Perennial Streams Affected in linear feet (PC/DC)	0	0	20,406/ 11,529	27,406/ 10,661	19,016/ 11,001
	Intermittent Streams Affected in linear feet (PC/DC)	0	0	53,634/ 21,336	22,216/ 13,401	56,069/ 26,360
Groundwater Resources	Number of Sole Source Aquifers Affected	0	0	0	0	0
	Number of Regulatory Wellhead Protection Areas Affected	0	0	0	1	0
Floodplains / Floodways	100-Year Floodplain Encroachment in Planning Corridor (acres)	0	0	161	203	224
	100-Year Floodplain Encroachment in Design Corridor with bridges (acres)	0	0	58	63	85
	Number of Regulated Floodways Crossed	0	0	4	4	3
Terrestrial Ecology	Forest Land Habitat Affected (acres PC/ DC)	minor	minor	2,184/ 1,140	1,370/ 599	1,931/ 998
	Agricultural Land Habitat Affected (acres PC/ DC)	minor	minor	965/ 517	1,237/ 557	1,229/ 707
	Transitional Land Habitat Affected (acres PC/ DC)	minor	minor	4 / 3	4 / 3	4 / 3
Wetlands	Acreage of Wetlands Affected (PC / DC)	0	0	289/ 138	255/ 110	270/ 135
	Acreage of Estimated Compensation (acres PC/DC)	0	0	537/254	465/196	488/241
Wild & Scenic Rivers	Number of National Wild & Scenic Rivers Affected	0	0	0	0	0
	Number of State Wild & Scenic Rivers Affected	0	0	0	0	0
Threatened & Endangered Species	Potential Effects to Documented Habitat-Populations of Federally Listed T&E Species	0	0	0	0	0

1 All cultural resources identified in this table are NRHP-listed or NRHP-eligible.

2 Archaeological investigations will be conducted on the preferred alternative.

## S.5. OTHER MAJOR ACTIONS

Other major actions proposed by other governmental agencies include the following:

- The Virginia Department of Rail and Public Transportation's Richmond/Hampton Roads Passenger Rail Study is pending and a preferred alternative has not been identified to date.
- Virginia Department of Aviation's Eastern Virginia Airport System Study was completed in July 2001. It identified the potential for the creation of a new Air Carrier Airport in Isle of Wight County. However, this proposed airport is not currently included in the Department's long-range plan.
- The County of Isle of Wight's current Comprehensive Plan identifies the need for a Route 258 Bypass. However, this project is not included in VDOT's 6-year Transportation Improvement Plan nor is it included in the Hampton Roads PDC's 2030 Constrained Long Range Plan.
- Prince George County, in conjunction with private developers, is developing a 1,800 industrial park for light manufacturing and distribution. This industrial park is located near the I-295 and Route 460 interchange. Anticipated build-out is within the next five to ten years.
- The Town of Waverly and the County of Sussex are discussing developing a regional industrial park on approximately 171 acres at the old Waverly Airport along Route 460.
- Within the next two to three years, the Town of Wakefield is planning to expand its town limits by annexing additional land. The size and the limits of the annexation are not currently known.
- The County of Isle of Wight owns approximately 400 acres to be developed for industrial use adjacent to the existing Shirley T. Holland Industrial Park (near the Town of Windsor).

## S.6. AREAS OF CONTROVERSY

Some areas of controversy regarding the study include:

- Concept of Bypassed Communities

Several small communities along the existing Route 460 have expressed concerns about negative community and/or economic impacts from new location bypasses. These issues were researched and analyzed in context, and both positive and negative impacts from new location bypasses can be expected. Negative impacts include loss of traffic with corresponding loss of business for highway-related businesses. Positive impacts include improved safety, truck traffic reductions, and improved pedestrian mobility in downtown areas, with corresponding benefits to downtown businesses.

- Impacts to Wetlands and Streams

Throughout the Federal agency partnering process, resource agencies have noted the potential for new roadway alignments to cause impacts to wetlands and streams. The study team has identified numerous opportunities to minimize and avoid impacts to natural resources. Should any of the CBAs be selected, these efforts will continue throughout the design and construction phase of the project.

## S.7. UNRESOLVED ISSUES

### Selection of Alternative

After the Location Public Hearings are held and comments from the hearings and the DEIS comment period have been reviewed, the Commonwealth Transportation Board (CTB) will determine a preferred alternative. Responses to comments on the DEIS and documentation of the selected alternative will be provided in the Final Environmental Impact Statement (FEIS). Should any of the CBAs be selected, final mitigation measures will be coordinated with the appropriate jurisdictional authorities and documented in the FEIS.

### Funding

There is no identified state or federal funding to implement improvements in the study area other than the projects identified in the VDOT six-year plan and the Constrained Long Range Plans (CLRPs) for the Hampton Roads MPO and the Tri-Cities MPO. . These projects are included in the No Build Alternative.

### Tolls

A study was conducted in conjunction with the Location Study to evaluate issues related to implementing tolls on CBAs 1 and 3. CBA 2 is not a candidate for tolling because it is not entirely a limited access facility, and only 55 percent of its length may be effectively tolled. Given the preliminary nature of the Location Study, it is too early in the project development timeframe to determine if the selected alternative would be a toll facility.

### Metropolitan Planning Organization (MPO) Actions

Subsequent to the selection of a preferred alternative, the two MPOs for the study area would revise their long range transportation plans to include the selected alternative. Currently the Hampton Roads MPO includes a new alignment alternative in the CLRP; however, funding for the project relies upon 50 percent toll revenue. The Tri-Cities MPO does not include a new location alignment in their CLRP.

## S.5 APPROVALS REQUIRED

Construction of a build alternative would necessitate several actions requiring environmental regulatory permits. These include:

- Army Corps of Engineers authorization for work in waters of the U.S. (including wetlands) under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.
- Authorization from the Virginia Marine Resources Commission for construction in state subaqueous lands under Title 62.1 of the Code of Virginia
- Virginia Department of Environmental Quality authorization for work in waters of the state under the Virginia Water Protection Permit program.
- A Stormwater Management Program Permit issued by the Virginia Department of Conservation and Recreation.
- In the event of adverse affects to historic properties, a Memorandum of Agreement would need be executed between the FHWA and the Virginia Department of Historic Resources.
- Conversion of lands within designated Agricultural / Forestal Districts associated with CBA 1 or CBA 3 may require approval from the Isle of Wight County Board of Supervisors. If so, VDOT would submit a "Notice of Intent to Acquire Land in Agricultural / Forestal District" to the County.